

Application No.: 10/065,524

Docket No.: JCLA8269

AMENDMENTS

Please amend the application as indicated hereafter.

In The Claims:

Claim 1. (currently amended) A method of hot switching a data transfer rate on a ~~[[the]]~~ bus, to dynamically switch the ~~[[bus]]~~ data transfer rate on the bus between a first control chip and a second control chip, comprising the steps of:

the first control chip and the second control chip receiving a transfer rate switching command;

when either there is no data transaction processed or the data transaction process is finished, the first control chip issuing a bus release connect command;

the first control chip and the second control chip entering into the bus release connect state according to the bus release connect command;

either the first control chip or the second control chip issuing a bus re-connect command; and

the first control chip and the second control chip re-connecting to the rated-changed bus ~~changed data transfer rate~~ according to the transfer rate switching command.

Claim 2. (original) The method of hot switching data transfer rate on the bus of claim 1, wherein the first control chip is a north-bridge chip, and the second control chip is a south-bridge chip.

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Claim 3. (original) The method of hot switching data transfer rate on the bus of claim 2, wherein the data transfer rate is switched between four times the north-bridge chip clock frequency and eight times the north-bridge chip clock frequency.

Claim 4. (original) The method of hot switching data transfer rate on the bus of claim 1, wherein the first control chip and the second control chip both have a transfer rate register for temporarily storing the transfer rate switching command.

Claim 5. (currently amended) A method of hot switching a data transfer rate on a ~~the~~ bus, comprising the steps of:

~~a bus between a first control chip and a second control chip~~ receiving a transfer rate switching signal before data transfer on the bus between a first control chip and a second control chip is interrupted; and

when the first control chip and the second control chip are in a bus release state and then re-connecting, providing another data transfer rate ~~one of a plurality of data transfer rates~~ to the bus according to the transfer rate switching signal.

Claim 6. (original) The method of hot switching data transfer rate on the bus of claim 5, wherein the first control chip is a north-bridge chip, and the second control chip is a south-bridge chip.

Claim 7. (original) The method of hot switching data transfer rate on the bus of claim 6, wherein the data transfer rates at least comprise four times the north-bridge chip clock frequency and eight times the north-bridge chip clock frequency.

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Claim 8. (original) The method of hot switching data transfer rate on the bus of claim 5, wherein the first control chip and the second control chip both have a transfer rate register for temporarily storing the transfer rate switching command.

Claim 9. (currently amended) A method of hot switching a data transfer rate on a ~~[[the]]~~ bus, to dynamically switch a plurality of data transfer rates on the ~~[[a]]~~ bus between a first control chip and a second control chip, comprising the steps of:

the first control chip and the second control chip receiving a data transfer rate switching command, and temporarily storing the data transfer rate switching command into ~~[[a]]~~ transfer rate ~~register~~ registers of the first control chip and the second control chip;

when either there is no data transaction processed or the data transaction process is finished, issuing a bus release connect command to have the first control chip and the second control chip enter into a bus release connect state; and

when either the first control chip or the second control chip issues a bus re-connect command, the first control chip and the second control chip switching to one of the data transfer rates on the bus according to ~~[[the]] content~~ contents of the transfer rate ~~registers~~ register.

Claim 10. (original) The method of hot switching data transfer rate on the bus of claim 9, wherein the first control chip is a north-bridge chip, and the second control chip is a south-bridge chip.

Claim 11. (original) The method of hot switching data transfer rate on the bus of claim 10, wherein the data transfer rates at least comprise four times the north-bridge chip clock frequency and eight times the north-bridge chip clock frequency.